REMARKS/ARGUMENTS

Claims 1-69, 135, and 136 are pending in the present application. Claims 70-134 are canceled without prejudice and claims 1, 8, 12, 14, 28, 30, 34, 44, 45, 48, 63, 67, and 135 are amended. Support for the amendments to 1, 34, and 135 can be found on page 5, lines 30-34 and on page 11, lines 32-36 of the specification. The remaining amendments either correct typographical errors or bring the claims into compliance with independent claims 1 or 34. Amendments to the specification correct clearly typographical errors. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 101, Asserted Statutory Subject Matter Rejection

The examiner rejected claim 102 under 35 U.S.C. § 101 as being directed towards non-statutory subject matter. Applicants have canceled this claim, thereby rendering the rejection moot.

II. 35 U.S.C. § 112, First Paragraph, Asserted Written Description Requirement Rejection

The examiner rejected claims 1, 70, and 102 under 35 U.S.C. § 112, first paragraph. Applicants have canceled claims 70 and 102, thereby rendering the rejection moot with respect to these claims. Applicants have amended claim 1 accordingly to remove the specific claim language rejected by the examiner.

III. 35 U.S.C. § 102, Asserted Anticipation

The examiner rejected claims 1-8, 20, 24, 26-41, 70-71, 135-136, and 138-139 as anticipated by *Wachtel*, Method and Apparatus for Intelligent Data Assimilation, U.S. Patent 6,847,974 (January 25, 2005) (hereinafter *Wachtel*). Applicants have canceled claims 70, 71, 138, and 139, thereby rendering the rejection moot with respect to these claims. Applicants respectfully traverse the rejection of the remaining claims. The examiner states that:

> **As per claim 1,** Wachtel discloses a method for deriving transformations for transforming data from one data schema to another, comprising:
>
> receiving a source data schema (e.g. Fig. 14) and a target data schema (e.g. Fig. 17 - Note: receiving a M L message in order to process it again reads on receiving a target schema - see col. 15, lines 1-29), the source data being different from the target data, each schema having definition data readable from or stored on a computer media (Note: samples of schemas in Fig. 14, 17 depicts distinct forms of XML being readable from a computer media);
>
> mapping the source data schema into an ontology model; mapping the target data schema into the ontology model (e.g. Fig. 6-9; *xml, workflow, map* - col. 5, line

62 to col. 7, line 14 - Note: XML information/metadata when parsed by XPATH into a tree reads on a schema of definition); and

automatically deriving a transformation (e.g. Fig. 8-9, col. 12, line 51 to col. 13, line 26 -Note: *Intelligent data assimilation system* reads on automatic derivation) for transforming data conforming to the source data schema into data conforming to the target data schema (e.g. Fig. 6- 9; Fig. 17-18 -Note: output response based on mapping against ontology metastore based on service and output requests - Fig. 14,17 -- reads on source data schema in request conforming to target schema), using the ontology model;

wherein the transformation transforms data conforming to source schema directly to data conforming target schema (Note: using abstracted concepts stored in the model and invoking one or more pre-stored templates to instantiate a workflow - see col. 5, line 46 to col. 7, line 14 - - to include intelligence enabling the transforming into a target schema reads on data schema from the request --i.e. source schema -- directly converted into output schema without any intermediate data schema format; Fig. 10, step 5 16,5 18; Fig 6 and related text).

Final Office Action dated May 3, 2006, pp. 4-5.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983). In this case each and every feature of the presently claimed invention is not identically shown in the cited reference, arranged as they are in the claims.

Applicants first address the rejection of claim 1. Claim 1 as amended is as follows.

1. A computer implemented method for deriving transformations for transforming data from one data schema to another, comprising:

receiving a source data schema and a target data schema, the source data schema being different from the target data schema;

mapping the source data schema into an ontology model;

mapping the target data schema into the ontology model; and

deriving, using the ontology model, a derived transformation for transforming first data conforming to the source data schema into second data conforming to the target data schema, wherein the derived transformation is adapted to transform the first data directly into the second data, and wherein the derived transformation is adapted to transform the first data into the second data without transforming the first data via an ontological format.

Applicants have amended claim 1 to recite the feature that "the derived transformation is adapted to transform the first data into the second data without transforming the first data via an ontological

format." *Wachtel* does not teach this claimed feature. Therefore, *Wachtel* does not anticipate claim 1 as amended.

Wachtel instead teaches an intelligent data assimilation system in which logical search objects operably connect to external and internal data providers and in which search results are returned *using an ontology* describing atomic data objects and semantic objects. For example, *Wachtel* states that:

> An intelligent data assimilation system including an ontology description, workflows, and logical search objects. The logical search objects operably connect to external and internal data providers and return search results using an ontology describing atomic data objects and semantic objects. The semantic objects are grouped into larger semantic structures by workflows to create customized services that return search results termed data products. Services are accessed through an application server capable of responding to service requests from different types of data clients. Graphical user interfaces provide facilities for creating logical search objects and aggregating logical search objects into workflows and services.

Wachtel, Abstract. *Wachtel* also provides that:

> The intelligent data assimilation system provides data mapping tools to add semantic intelligence to atomic data with the purpose of providing users the ability to manipulate LSO results. By abstracting (grouping) various fields together into a well-defined ontology 112, an intelligent data assimilation system provides abstracted views of data allowing users to manipulate encapsulated data. For example, an intelligent data assimilation system can group a LSO called "First Name" 114 and a LSO called "Last Name" 116 into a semantic object 118 called "Name", and then group "Name" with another semantic object called "Address" 108 into a semantic object called "Person" 120. This semantic structure allows intelligent traversal and identification of any available information.
>
> By revealing all their intelligence on connectivity, such as ontological data and cost, the LSOs provide a mechanism for the logical search object subsystems to provide tools 122 for the definition of services that may be requested from the intelligent data assimilation system by a data client. The services generate results in the form of data products including data requested by the data client. Through the use of a graphical user interface, designers view all the available LSOs and semantic objects in a repository and manipulate LSOs and select desired LSOs or semantic objects and place LSOs and semantic objects into workflows.
>
> Each workflow typically represents a single service offering. By placing one or many LSOs into a workflow, a designer creates workflows resulting in a service. Some of the features of these workflows include the ability to run multiple LSOs in parallel, define failover LSOs, and define contingencies where the output of one LSO can be the input of another object.

Wachtel, col. 5, l. 62 through col. 6, l. 26.

Wachtel specifically provides that data in LSOs (logical search objects) are grouped into a well-defined ontology. Services requested by a client generate results in the form of data products including

data requested by the client. The designers view *all the available LSOs and semantic objects, manipulate selected LSOs, and place LSOs and semantic objects into workflows.* Thus, the designer creates workflows that use LSOs to create a service.

Because *Wachtel* uses the LSOs, which are defined into an ontology model, *Wachtel* necessarily teaches that the transformed data are transformed via an ontological format. *Wachtel* does not describe any other method for transforming data that would teach the claimed feature that "the derived transformation is adapted to transform the first data into the second data without transforming the first data via an ontological format." Because *Wachtel* does not teach this feature of claim 1, *Wachtel* does not anticipate claim 1.

Independent claims 34 and 135 contain features similar to those presented in claim 1. Hence, for the reasons presented above, *Wachtel* does not anticipate these claims. The remaining claims all depend from one of claims 1, 34, or 35. *Wachtel* does not anticipate the remaining claims at least by virtue of their dependency on claims 1, 34, or 35. Consequently, it is respectfully urged that the rejection of claims 1-8, 20, 24, 26-41 has been overcome.

Furthermore, *Wachtel* does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. *Wachtel* actually teaches away from the presently claimed invention because it teaches transforming data via an ontological format as opposed to transforming data without using an ontological format, as in the presently claimed invention. Absent the examiner pointing out some teaching or incentive to implement *Wachtel* and transforming data without using an ontological format, one of ordinary skill in the art would not be led to modify *Wachtel* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Wachtel* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using Applicants' disclosure as a template to make the necessary changes to reach the claimed invention.

IV. 35 U.S.C. § 103, Asserted Obviousness

The examiner rejected claims 9-19, 21-23, 25, 42-69, and 72-134 as unpatentable over *Wachtel* in view of *Lindberg et al.*, Method and System for Transferring Information Between a User Interface and a Database Over a Global Information Network, U.S. Patent 6,732,109 (May 4, 2004) (hereinafter *Lindberg*). The rejection with respect to claims72-134 is moot in that these claims have been canceled. Regarding the remaining claims, this rejection is respectfully traversed. Regarding claim 9, the examiner states that:

> **As per claims 9-10,** Wachtel does not explicitly disclose that (re claim 9) wherein the source data schema is a source table schema describing source data tables, wherein the target data schema is a target table schema describing target

> data tables, and wherein the source table schema and the target table schema each describes at least one table having columns; and that (re claim 10) wherein the source table schema is a source relational database schema describing source relational database tables, wherein the target table schema is a target relational database schema describing target relational database tables. However, Wachtel discloses, from figures 3, 8, 13, that the automatic transformation is an SQL query in that Wachtel discloses a query system involving a database search (Fig. 3,8, 13; *DBMS*- col. 9, lines 23-27) and a service to fulfill search in database based on XML specifications and then update database thereafter (updates database tables - col. 14, line 50 to col. 15, line 67) and database used in conjunction with modeling framework can be typified by Lindberg in which XML specifications can be mapped into properties relationships (col. 8, line 33 to col. 14, line 10). It would have been obvious for one skill in the art at the time the invention was made to implement the XML schema as parsed by Wachtel in the assimilation workflow instance so that both the target and source schemas correspond respectively to the database tables as shown by Lindberg, having relational DB constructs because schema is a fundamental means by which a relational database is designed/implemented and XML schema used to update records of data as suggested by Wachtel would be of better use if such XML schema is such as it corresponds the database tables upon which Wachtel's method is to fulfill client queries -- to fetch DB data and for updating-- it as purported above by the RDBM of Lindberg and the update approach by Wachtel.

Final Office Action dated May 3, 2006, pp. 11-12.

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994).

Claim 9 is as follows:

> 9. The method of claim 1 wherein the source data schema is a source table schema describing source data tables, wherein the target data schema is a target table schema describing target data tables, and wherein the source table schema and the target table schema each describes at least one table having columns.

The rejection of claim 9 depends on the rejection of claim 1 in that *Wachtel* was asserted as showing all of the features of original claim 1. However, claim 1 now includes the feature that "the derived transformation is adapted to transform the first data into the second data without transforming the first data via an ontological format." As shown above, *Wachtel* does not teach this claimed feature. *Wachtel* does not suggest this claimed feature because *Wachtel* teaches the opposite, that the data is transformed via an ontological format. Moreover, *Lindberg* does not teach this claimed feature. Instead, *Lindberg* is directed to transferring information between databases on different computers, wherein the

databases have four different processing layers. In fact, *Lindberg* does not address ontology at all. Thus, *Lindberg* also does not suggest this claimed feature.

Because neither *Wachtel* nor *Lindberg* teach or suggest the claimed feature that, "the derived transformation is adapted to transform the first data into the second data without transforming the first data via an ontological format," no combination of these references, even when taken together as a whole, can teach or suggest this claimed feature. For this reason, no *prima facie* case for obviousness can be made using a combination of *Wachtel* and *Lindberg*. Accordingly, Applicants request that the obviousness rejection be withdrawn.

Additionally, *Wachtel* now teaches away from claim 9. *Wachtel* requires that data be transformed via an ontological format. This teaching is directly contrary to the newly included claimed feature, which is part of claim 9 through claim 1. For this reason, *Wachtel* teaches away from claim 9. Accordingly, no teaching, suggestion, or motivation exists to combine *Wachtel* and *Lindberg* to achieve the invention of claim 9. Thus, no *prima facie* obviousness rejection can be made against claim 9 using *Wachtel* and *Lindberg*.

Additionally, no teaching, suggestion, or motivation exists to combine *Wachtel* and *Lindberg* because the references address wholly different problems. It is necessary to consider the reality of the circumstances--in other words, common sense--in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor. *In re Oetiker*, 977 F.2d 1443 (Fed. Cir. 1992); *In re Wood*, 599 F.2d 1032, 1036, 202 U.S.P.Q. 171, 174 (CCPA 1979). In the case at hand, the cited references address distinct problems. For this reason, no common sense reason exists to establish that one of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor. Accordingly, no teaching, suggestion, or motivation exists to combine the references and no *prima facie* obviousness rejection can be made against claim 9 using *Wachtel* and *Lindberg*.

For example, *Wachtel* is directed to solving the problem of scalability and reusability of a Web server architecture. *Wachtel* provides that:

> Previous development of Web servers focused on producing the most efficient use of computing resources to produce finer and finer vertical slices through a Web site. For example, a servlet once invoked includes all of the necessary logic necessary to acquire data according to a client request, format the acquired data into a document, and report back to the hosting system any statistics about the client/servlet interaction. Finer and finer vertical slices through a Web site leads to an unscalable Web server architecture because all the logic for acquiring data, generating a document, and producing side effects is included within a monolithic software object thus defeating the ability to reuse or integrate a particular software object in another system or software object.
>
> Therefore, a need exists for a scalable Web server architecture that features a

> high degree of reusability of a Web server's components. The present invention meets such a need.

Wachtel, col. 1, l. 59 through col. 2, l. 9.

On the other hand, *Lindberg* is directed to the problem of making abstract database architectures understandable and usable. For example, *Lindberg* provides as follows:

> In the prior art systems, there is no, or poor separation of concern between the structure of information and the structure of its use. In the project example discussed above, although the information structures (Car and Project) were almost identical, the implementation included project semantics in the information model. In other words, each implementation included structures that were specific to each particular application. The best solution would have been an abstract information model. Unfortunately, when using an "abstract model," the developer writing the business logic must use the structures of the model which, because they are "abstract", necessarily have abstract and difficult names. Therefore, the developer cannot express the logic in well-known terms. Moreover, because the abstract structures are generic to multiple uses, the developer may need to use several layers of "mental indirection" to obtain the desired result. Therefore, while an abstract information model is very flexible, its abstract nature makes the resulting logic difficult for users and subsequent developers to understand. Separation is needed between the need for an information model capable of holding all of the information in a flexible (adaptable and changeable) way, and the need for the users of the information to understand and work with the information.

Lindberg, col. 2, ll. 22-52.

Based on the plain disclosures of the references themselves, the references address completely distinct problems that are unrelated to each other. The problem of scalability and reusability of a Web server architecture is completely distinct from the problem of making abstract database architectures understandable and usable. Because the references address completely distinct problems, one of ordinary skill would have no reason to combine or otherwise modify the references to achieve the claimed invention. Thus, one of ordinary skill in the art would not combine these references to achieve the invention of claim 9 because no teaching, suggestion, or motivation exists to combine the references in the manner suggested by the examiner. Accordingly, no *prima facie* obviousness rejection can be made against claim 9 using *Wachtel* and *Lindberg*.

The remaining claims all depend from one of independent claims 1 or 34. Therefore, no *prima facie* case for obviousness can be made against the remaining claims for the reasons presented above. Accordingly, the rejection of claims 9-19, 21-23, 25, 42-69, and 72-134 under 35 U.S.C. § 103 has been overcome.

V. Conclusion

It is respectfully urged that the subject application is patentable over *Wachtel* and *Lindberg* and is now in condition for allowance. The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,

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